

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte WALTER JOHN SIMMONS  
and DOMENIC JOSEPH BARSOTTI

Appeal No. 2002-0054  
Application 09/500,561

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ON BRIEF

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Before TIMM, DELMENDO, and PAWLIKOWSKI, Administrative Patent Judges.

PAWLIKOWSKI, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal from the final rejection of claims 1 through 31, which are all the claims pending in the application.

A copy of the decision in related application serial number 09/273,040 (Appeal No. 2002-0173) is provided herewith.

The references relied upon by the examiner as evidence of unpatentability are:

Bivens et al. (Bivens)	4,280,943	Jul. 28, 1981
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Talbot	4,350,783	Sep. 21, 1982
Ceska	4,722,976	Feb. 02, 1988
Gebauer et al. (Gebauer)	DE 3,226,602	Jan. 19, 1984
(German Patent, English Translation by Schreiber Translation, Inc.)		
Yamamoto et al. (Yamamoto)	JP 60-003,399	Jan. 09, 1985
(Japanese Patent, English translation by diplomatic Language Services, Inc.)		

Claims 1-31 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bivens in view of Talbot and further in view of Gebauer or Yamamoto, and further in view of Ceska.

As a preliminary matter, on pages 3-4 of the answer, the examiner states that the Gebauer disclosure is not "necessary for the rejection". The examiner does not present a position on this reference. Hence, we do not comment on this reference in reaching our decision. We also note that the examiner relies upon Yamamoto in part for teaching the use of nitrogen gas, which is recited in appellants' claim 4, which is a claim not under consideration in this appeal. The examiner has not pointed out the type of resin system set forth in Yamamoto and how such relates to Bivens. Hence, we determine that Yamamoto is more removed from the issues in this case, and we are able to reach our determinations regarding claims 1, 6, and 18 without reliance upon Yamamoto, and therefore do not further comment on Yamamoto in this decision. A copy of claims 1, 6, and 18 are set forth in the attached appendix.

We present our analysis by reviewing claims 1 and 18 (representative of the claims that do not require a sugar component) apart from claim 6 (representative of the claims requiring a sugar component). We do this in order to

incorporate our decision made in related Appeal No. 2002-0173 in a more concise manner, as made evident below.

### **OPINION**

For the reasons set forth below, we affirm-in-part the rejection of claims 1-31 under 35 U.S.C. § 103 as being unpatentable over Bivens in view of Talbot, and further in view of Gebauer or Yamamoto, and further in view of Ceska.

#### **I. The rejection involving Claims 1 and 18**

Claims 1 and 18 are set forth below:

1. A grouting composition comprising a first component, a second component, and a compressible substance wherein said first component comprises a peroxide, a liquid which comprises water, and a solid particulate; and said second component comprises a polymer, a crosslinking agent, and a solid particulate and said liquid is present in said first component in the range of from about 5 to about 35 weight % of said polymer.

18. A process comprising combining a grouting composition with a compressible substance wherein said composition comprises a first component and a second component; said first component comprises a peroxide, a liquid which comprises water, and a solid particulate; and said second component comprises a polymer and a crosslinking agent.

Claims 1 and 18 do not require a sugar component (whereas claim 6 does require a sugar component, discussed, infra).

Turning now to the prior art rejection, the examiner's position is that Bivens teaches appellants' system without a compressible substance and without sugar. (answer, page 3).

The examiner relies upon Talbot for teaching the use of a compressible substance, such as carbon dioxide. The examiner relies upon Yamamoto for also teaching the use of a compressible substance such as nitrogen gas. (answer, page 3). We find that Bivens is directed to a two-part resin system. One part of the two-part resin system comprises an unsaturated polymerizable polyester resin, a crosslinking agent, and a solid particulate such as limestone (col. 2, lines 55, 63-65, col. 5, lines 32-34). We refer to this part as the "first component" of the system. A second part of the two-part resin system comprises a peroxide catalyst, water, and solid particulates (col. 2, lines 60-65). We refer to this part as the "second component" of the system.

We also find that Talbot teaches a two-part resin system. One part of the two-part resin system comprises the resin composition (col 2. line 33), a solid particulate such as a calcium carbonate (col. 2, line 40), a CO<sub>2</sub> generating weak acid (col. 2, line 54), and a small, effective amount of water (col. 2 line 66-col. 3, line 3). We refer to this part of the system as the "first component" of the two-part resin system.

The second part of the two-part system of Talbot comprises a conventional catalyst, or hardener paste (such as benzoyl peroxide), and a filler (col. 3, lines 4-12). We refer to this part as the "second component" of the two-part resin system.

One of the objects of the invention of Talbot is to add significant shelf life to the mining roof bolting package system. This is accomplished by the addition of a relatively weak acid constituent which reacts with the calcium carbonate filler in the resin system to form carbon dioxide in situ (col. 1, lines 47-62). This enables generation of carbon dioxide in

situ to accomplish the objective of maintaining sufficient internal pressure within the resin system capsule over an extended period of time to enable the capsule to maintain its stiffness or rigidity (col. 1, lines 64-68 and col. 2, lines 1-3). The internal pressure created provides for almost an equilibrium pressure state that adds significantly to the shelf life of the first component of the two-part resin system (col. 1, lines 50-57).

Hence, Talbot teaches to utilize carbon dioxide to promote the shelf life of the first component of the two-part resin system.

In this context, we agree with the examiner that Bivens in view of Talbot sets forth a prima facie case of obviousness in connection with claim 1. That is, sufficient motivation exists to include the CO<sub>2</sub> generating components of Talbot in the first component of the two-part system of Bivens in order to enhance the shelf life of the first component of Bivens. This would result in a composition having a compressible substance therein.

We do not agree with the examiner that Bivens in view of Talbot sets forth a prima facie case with respect to claim 18 because claim 18, a process claim, requires the process step of "combining" a grouting composition with a compressible substance. Because the carbon dioxide in Talbot is generated in situ, this "combining" step is not taught.

In view of the above, we **affirm** the rejection involving claim 1 under 35 U.S.C. § 103 as being unpatentable over Bivens in view of Talbot, and further in view Gebauer or Yamamoto, and further in view of Ceska.

We **reverse** the rejection of claim 18 under 35 U.S.C. § 103 as being unpatentable over Bivens in view of Talbot and further in view Gebauer or Yamamoto, and further in view of Ceska.

## II. The Rejection of Claim 6

Claim 6 requires that the second component further comprises a sugar. This claim is set forth below:

6. A composition according to claim 1 wherein said first component, second component, or both further comprises a sugar.

In the rejection, the examiner additionally relies upon Ceska for teaching that sugars serve as accelerators in combination with a peroxide initiator. (answer, page 4).

For the reasons set forth in Appeal No. 2002-0173 (a copy which is provided herewith), in connection with the combination of Bivens in view of Ceska, we reverse the rejection involving claim 6.

III. Conclusion

The rejection of record is affirmed-in-part.

**AFFIRMED IN-PART**

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ROMULO H. DELMENDO	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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BEVERLY A. PAWLIKOWSKI	)	
Administrative Patent Judge	)	

Timm, Administrative Patent Judge, concurring.

I concur fully with the majority decision, but write separately to express an additional point. Namely that the difference in water content as expressed in Bivens and Talbot does not teach away from making the combination.

Appellants argue that because Bivens requires a large quantity of water and Talbot expressly limits the water to a minimal amount, the references teach away from the combination (Brief at 8-9). In arguing that Talbot requires less water than Bivens, Appellants have oversimplified what the two references actually teach and suggest. Both Bivens and Talbot describe grouting compositions with a catalyst component and a resin component. In the composition of Bivens the water can be present in either or both components (Bivens at col. 3, ll. 6). The location is not critical, it is the overall ratio of the resin formulation to water upon mixing that matters (Bivens at col. 3, l. 53 to col. 4, l. 2). Talbot describes adding water to the resin component along with weak acid to generate carbon dioxide in the resin component (Talbot at col. 2, ll. 6-15).

In light of what Bivens and Talbot teach as a whole, I cannot say that these references teach away from their combination. If the combination of the references would not produce an operative composition useful for its intended purpose, *See In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969); *see also In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984), or one of the references deliberately

sought to avoid the use of water as taught by the other, there would be a teaching away such that there would have been no reason to make the combination. That is not the case here. Here, Talbot does not teach away from the water levels of Bivens as Talbot does not counsel against adding water to the catalyst component. Furthermore, one of ordinary skill in the art could combine the teachings so as to obtain a useful grouting composition with a distribution of water between the two components so that the small effective amount were present in the resin component for the generation of carbon dioxide as taught by Talbot, but the overall amount of water in the system was the amount specified by Bivens. The references do not teach away from the combination.

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CATHERINE TIMM	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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## APPENDIX

1. A grouting composition comprising a first component, a second component, and a compressible substance wherein said first component comprises a peroxide, a liquid which comprises water, and a solid particulate; and said second component comprises a polymer, a crosslinking agent, and a solid particulate and said liquid is present in said first component in the range of from about 5 to about 35 weight % of said polymer.

6. A composition according to claim 1 wherein said first component, second component, or both further comprises a sugar.

18. A process comprising combining a grouting composition with a compressible substance wherein said composition comprises a first component and a second component; said first component comprises a peroxide, a liquid which comprises water, and a solid particulate; and said second component comprises a polymer and a crosslinking agent.

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